Remarks

Applicants thank the Examiner for the careful examination of this application and the clear explanation of the rejections.

The amended title conforms to the claimed matter. The amended specification includes reference to a related patent. The new claims obviate the rejections under 35 USC 112 and 103.

The new claims "particularly point out and distinctly claim the subject matter the applicant regards as his invention."

New claim 46 defines a mobile time division duplex receiver.

An antenna receives radio signals that include equal time frames that are divided into equal time slots. Each time slot includes a first group of data symbols, midamble symbols of a predetermined training sequence that are cyclically time shifted for different broadcast antenna and users, a second group of data symbols, and a guard period. The midamble symbols include a cyclic prefix obtained by copying over the tail end of the cyclically time shifted midamble symbols. The antenna providing received signals representing the data symbols and midamble symbols.

Filter circuitry has an input coupled to the received signals. The filter circuitry operates to provide channel estimate output signals of a first and second broadcast antennae in response to the midamble symbols, including the cyclic prefix.

Space time transit diversity decoder circuitry has inputs connected to the channel estimate output signals.

Claim 46 finds support in paragraphs [0034]-[0036] and Figures 2, 3, 4, 5B, and 6A.

In contrast, US 6,317,411 to Whinnett discloses:

> In the subscriber unit, antenna 38 receives the transmitted signals. The transmitted signals are then down converted using down converter and demodulator 40 and coupled to despreader 41, and thereafter to space-time decoder 66. The output of space-time decoder 66 is the estimated symbols multiplied by a factor calculated from the sum of the squares of the magnitude of the channel coefficients. These symbols and factors are then input into deinterleaver and decoder 44, which deinterleaves and decodes the symbols and outputs traffic channel data.
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> Although deinterleaver and decoder 44 are shown with the same reference numeral in FIG. 1 and FIG. 3 for both the OTD and STTD diversity schemes, respectively, it is important to understand that the deinterleaver and decoder function corresponds to the encoding and interleaving processes used in data source 20. Some performance improvements may be realized by selecting interleaving schemes specifically for a particular one of the diversity techniques. The reason that a different interleaving functions provides a different result is that the OTD diversity scheme uses commutator 24. The interleaving scheme for OTD should be selected so that adjacent symbols experience different fading through different channels. Column 3, lines 23-45

Claim 46 requires space time transit diversity decoder circuitry and filter circuitry having an input coupled to the received signals, the filter circuitry operating to provide channel estimate output signals of a first and second broadcast antennae in response to the midamble symbols, including the cyclic prefix. The patent to Whinnett fails to teach or disclose the

particular claimed filter circuitry in addition to the space time transit diversity decoder circuitry.

US 6,373,831 to Secord discloses only transmitting circuitry. The Secord patent thus fails to teach or disclose the particular claimed filter circuitry in addition to the space time transit diversity decoder circuitry.

Claim 46 stands allowable.

The depending claims also stand allowable as depending from allowable independent claim 46 and as including, in combination with the limitations of the independent claim, additional distinguishing limitations.

The application is in allowable form and the claims distinguish over the cited references. Applicants respectfully request reconsideration or further examination of this application.

Respectfully Submitted,

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